

Data Cartridge Library

Abstract

The present invention is directed to a data cartridge library that, in one embodiment, is comprised of: (a) a frame or cabinet that defines an interior space; (b) a multi-piece magazine that forms a portion of the frame; (c) a drive bay with a full-height drive space that is capable of accommodating a full-height drive and of being altered to accommodate two, half-height drives; (c) a picker that employs a crank that is capable of rotating 360 degrees and that carries a first cam driver that cooperates with a first cam follower to actuate a grasper that is capable of grasping and releasing a data cartridge, and a second cam driver that cooperates with a second cam follower to move the grasper towards and away from a location at which a data cartridge is located; (d) an elevator for moving the picker within a portion of the interior space and that is comprised of a first and second drive systems for respectively driving the first and second ends of an elevator carriage and a shaft for transferring power from the first drive system to the second drive system; (e) a robotics module that can be removed from the interior of the frame and is comprised of the picker and a

substantial portion of the elevator; (f) an access port that allows a user to access the interior space and does not comprise a hinge; and (g) a universal bay that provides a space for accommodating electronic components that provide for enhanced operation and that can be divided into sub-spaces. Another embodiment of the invention is directed to a magazine that is used to move data cartridges into and out of the library via an entry/exit port. In one embodiment, the magazine comprises a box-structure that is capable of holding a plurality of data cartridges, a dust cover, and a coupling structure comprised of a member that extends away from the side wall of the box structure.